Journal of Pioneering Medical Sciences
Received: February 01, 2025 | Accepted: March 05, 2025 | Published: June 05, 2025
Volume 14, Issue 05, Pages 37-40

DOI https://doi.org/10.47310/jpms2025140507

Effectiveness of Cognitive Behavioural Therapy Verses Counselling on Internet Addiction Among Late Adolescence in Selected Arts College

V. Vasanthamani[1*], Radha Kumar[2] and R. Revathi[3]

[1]Child Health Nursing, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Chennai, India
[2]Department of Paediatrics, Saveetha Medical College Hospital, Saveetha Institute of Medical and Technical Sciences (SIMATS), Chennai, India
[3]Department of Medical surgical nursing, Velammal College of Nursing, Madurai, India

Author Designation: [1]Ph.D. Scholar, [2,3]Professor

*Corresponding author: V. Vasanthamani (e-mail: vasanthamaniv19@yahoo.com).

©2025 the Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0

Abstract **Background:** Adolescents who use the internet excessively do worse academically than their non-addicted peers and they may also suffer from attention deficit and hyperactivity disorder. The aim of the present study to determine the effectiveness of CBT and counseling in terms of internet addiction among late adolescence. **Methods:** Quantitative approach and true experimental design with pre-test and post-test design used for the study. Students from selected college were screened with internet addiction assessment tool. Out of 970 students, 369 students were scored 40 to 72. From 369 students, 330 students were selected by simple random sampleing technique. The study sample comprised all first-year students in selected colleges, from which data was collected from 330 students. Experimental Group I included 110 students from the morning batch, Experimental Group II included 110 students from the evening batch of the same college and the control group consisted of 110 students from the regular batch of another selected college. **Result:** The study results showed that both the CBT and counselling groups showed a significant reduction in internet addiction after the intervention ($p<0.05$). **Conclusion:** The study's findings concluded that cognitive behavioral therapy is slightly more effective than counseling in addressing internet addiction.

Key Words Internet Addiction, Counselling, Cognitive Behavioral Therapy

INTRODUCTION

In the last several decades, the internet has radically revolutionised the globe and in the twenty-first century, internet usage has increased at an accelerated rate on a global scale. Better options for education, communication, banking, companies, health care and social contact have been made possible by global digitalization. Unfortunately, excessive internet use can cause maladaptive habits. Internet addiction, also known as problematic or pathological internet use, is one of the maladaptive behaviours and is defined as "excessive or poorly controlled preoccupations, urges, or behaviours regarding computer use and internet access that results in impairment or distress [1-3].

Adolescents who use the internet excessively do worse academically than their non-addicted peers and they may also suffer from attention deficit and hyperactivity disorder. Additionally, it was shown that teenagers who were hooked to the internet experienced emotional and behavioural issues, had a higher risk of developing depression and were more prone to experiencing negative feelings such social anxiety, phobia, loneliness and suicide ideation. It has been demonstrated in some previous studies that teenagers who are Internet addicts exhibit more aggressive attitudes [4,5].

Internet addiction illness is linked to co-occurring mental disorders and emotional issues such anxiety, sadness, eating disorders, attention deficit hyperactivity disorder and hostility [6-8]. Lutfian *et al.* [9] conducted a review study on cognitive behaviour therapy as treatment for internet addiction among adolescents. He analysed nine major journals and revealted that CBT intervetions was improved the neurotransmittors in brain which was confirmed by imaging. It has been concluded that CBT was effective in reducing the internet addiction behaviour among adolesecnets [9].

According to estimates, 6.0% of 12- to 41-year-olds worldwide have Internet Use Disorders (IUD), with the

Middle East having the highest prevalence. In 2013, 70% of teenagers (aged 14 to 18) utilised social media every day and by 2018, 45% of teenagers spent "almost all the time" online [10].

The use of the Internet has become much more widespread. According to a Kantar ICUBE estimate, India will have 639 million monthly active Internet users, an 11% increase from 2019. In India, the age range of Internet users is 12-29 years. Our nationally representative data indicate that around 20% to 40% of college students in India are at risk due to excessive internet use. It's essential to standardize the cut-off scores of the Young Internet Addiction Test (Y-IAT) to accurately assess the severity of this issue. With the widespread internet use in India, our findings highlight a significant prevalence of problematic internet use among young adults, justifying increased investment in mental health services and the development of a national policy [11].

India's use of the internet and broadband has been growing rapidly, with 665.31 million internet users in 2019 [12]. Based on review study and articles the investigator aimed at the effectiveness of cognitive behavioral therapy verses counselling on internet addiction among late adolescence.

MATERIALS AND METHODS

Participants

The study sample comprised all first-year students in selected colleges. In this study the experimental Group I included 110 students from the morning batch, Experimental Group II included 110 students from the evening batch of the same college and the control group consisted of 110 students from the regular batch of another selected college. Students who met the inclusion criteria were selected using a simple random sampling technique. The study was approved by the SMCH-Institutional Ethics Committee, number 003/08/2022/IEC/SMCH. The study was conducted form June 2023 to June 2024. Every student and parents gave written consent.

Sample Size Calculation

Based on power analysis, the required sample size was determined to be 110 per group. Students were selected according to the inclusion criteria, resulting in 110 students in Experimental Group I, 110 students in Experimental Group II and 110 students in the Control Group.

Inclusion and Exclusion Criteria

Inclusion criteria includes:

- All first-year college students
- Age group of 17 to 18 years
- Internet addiction score between 40 to 72

Exclusion criteria contain:

- Students who are already under any therapy for internet addiction
- Students who are not able to communicate in English and Tamil. Tools consist of internet addiction assessment tool

METHODS

Intervention

The study utilized a quantitative approach and a true experimental design with a pre-test and post-test. A pre-test and post-test I was conducted for the experimental-I, experimental-II and control groups. Students from selected college were screened with internet addiction assessment tool. Out of 970 students, 369 students were score 40 to 72. From 369 students, 330 students were selected by simple random sampleing technique. The experimental Group I (110 students) received CBT once in a week for 8 weeks. The CBT-IA model is a comprehensive approach divided into three stages: Behaviour modification, cognitive restructuring and Harm Reduction Therapy (HRT). The experimental Group II (110 students) received counselling once in a week for 8 weeks. Each session of counselling will be given in five stages, relationship building, Assessment, goal setting, Intervention, termination. After 8 weeks, experimental-I, experimental-II and control groups were given a post-test. The control group (110 students) received no intervention.

Statistical Analysis

The data were expressed as Mean±SE. Means were compared using two-way analysis of variance (ANOVA) to evaluate group differences, test differences and their interactions. When significant differences were identified, the Bonferroni 't' test was employed for multiple comparisons both between and within groups. A probability value of 0.05 or less was considered statistically significant. Statistical analyses were conducted using SigmaPlot version 14.5 (Systat Software Inc., USA).

RESULTS

Internet Addiction

In Pre-test, 29.1% of late adolescence in the control group showed possible addiction, while 70.9% were likely addicted. For Experimental Group I, 33.6% were possibly addicted and 66.4% were likely addicted. In Experimental Group II, 38.2% showed possible addiction and 61.8% were likely addicted. Overall, the data suggests a substantial prevalence of internet addiction among late adolescents, with varying degrees across the different groups.

In post-test 22.7% of late adolescene in the control group showed possible addiction and 77.3% were likely addicted. In experimental Group I had 32.7% borderline addiction and 67.3% had little to no addiction, while in experimental Group II had 38.2% borderline addiction and 61.8% had little to no addiction. The result revealed that after CBT the Experimental group I there was 30.8 % decrease in internet addiction level and experimental Group II 33.14% decrease in internet addiction level from Pre-test to Post-test showing the beneficial effect of the intervention (Table 1,2).

Table 1: Level of internet addiction among late adolescence in Pre-test, Post-test

Group	Test	Little or No	Borderline	Possible	Likely	Statistics
Control Group	Pre-test	0 (0%)	0 (0%)	32 (29.1%)	78 (70.9%)	$\chi^2 = 1.164$
	Post-test	0 (0%)	0 (0%)	29 (26.4%)	81 (73.6%)	p = 0.559
Experimental Group I	Pre-test	0 (0%)	0 (0%)	37 (33.6%)	73 (66.4%)	$\chi^2 = 304.784$
	Post-test 1	39 (35.5%)	64 (58.2%)	3 (2.7%)	4 (3.6%)	p<0.001
Experimental Group II	Pre-test	0 (0%)	0 (0%)	42 (38.2%)	68 (61.8%)	$\chi^2 = 297.931$
	Post-test 1	33 (30%)	68 (61.8%)	4 (3.6%)	5 (4.6%)	p<0.001

Table 2: Combined comparison of academic performance among control, experimental Group I and experimental Group II (Pre-test vs. Post-test)

S. No.	Group comparisons/Test comparisons	Statistics (Mean±SE or t/p-value)
1	Control-Pre-test	23.16±0.398
	Control-Post-test	23.72±0.415
	Experimental Group I-Pre-test	20.18±0.514
	Experimental Group I-Post-test	27.28±0.337
	Experimental Group II-Pre-test	20.24±0.445
	Experimental Group II-Post-test	26.21±0.381
2	Pre-test: Control vs. Experimental Group I	t = 5.219, p<0.001
	Post-test: Control vs. Experimental Group I	t = 6.238, p<0.001
3	Within Experimental Group I (Pre vs. Post-test)	t = 12.428, p<0.001
4	Within Control Group (Pre vs. Post-test)	t = 0.971, p = 0.996
5	Pre-test: Control vs. Experimental Group II	t = 5.112, p<0.001
	Post-test: Control vs. Experimental Group II	t = 4.350, p<0.001
6	Within Experimental Group II (Pre vs. Post-test)	t = 10.431, p<0.001

DISCUSSION

The findings from the mentioned Cognitive-Behavioral Therapy (CBT) intervention demonstrate a statistically significant reduction in internet addiction levels among late adolescents, with a notable decrease of 30.8% in Experimental Group I and 33.14% in Experimental Group II, as evidenced by a p-value of <0.001. This contrasts sharply with the control group, which exhibited no significant changes in addiction levels (p>0.05). These results underscore the efficacy of CBT in mitigating the adverse impacts of internet addiction, especially in adolescent populations.

Several studies corroborate these findings, illustrating the effectiveness of CBT in addressing various forms of addiction, including internet addiction. For instance, Liu *et al.* [13] conducted a systematic review demonstrating that CBT is effective in treating internet addiction by helping modify behaviors linked to addictive patterns. Further supporting this, Agbaria's study elaborates on the core mechanisms of CBT that facilitate self-control and enhance goal-oriented behaviors through cognitive restructuring, leading to reduced impulsivity and improved management of internet usage [14].

The theoretical underpinning of CBT as a targeted intervention for internet addiction stems from its capacity to address cognitive distortions and maladaptive behaviors associated with addictive patterns. According to Lopez-Fernandez *et al.* [15], CBT is regarded as an effective method for treating technology-related addictions, as it provides a structured approach to altering harmful thought patterns and behaviors. This is reaffirmed by a meta-analysis conducted by Stevens *et al.* [16], which confirms that CBT significantly benefits adolescents with internet gaming disorder and can yield reductions in associated psychological difficulties.

Moreover, the results align with prior empirical evidence suggesting that interventions incorporating CBT can lead to substantial improvements in related symptoms such as anxiety and depression among adolescents. The work by Kim *et al.* [17] illustrates how CBT not only alleviates addiction symptoms but also promotes general emotional well-being and healthier coping mechanisms, reflecting long-term success in managing problematic internet use.

CONCLUSIONS

The study finding showed that there is a significance difference in pre-test and post-test score of internet addiction in experimental group I and experimental group II. Cognitive behavioral therapy is slightly more effective than counseling in addressing internet addiction. The study's findings concluded that cognitive behavioral therapy is slightly more effective than counseling in addressing internet addiction. Further larger studies are recommended to determine the effectiveness of various intervention on internet addiction, academic performance and its impacts among adolescent students.

Acknowledgement

We would like to express our sincere gratitude to all the participants and our research guides for their invaluable contributions to this study.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the authorship and publication of this article.

REFERENCES

[1] Tahir, Muhammad Junaid, *et al.* "Internet addiction and sleep quality among medical students during the COVID-19 pandemic: A multinational cross-sectional survey." *PloS One,* vol. 16, no. 11, November 2021. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0259594.

[2] Kuss, Daria J. and Olatz Lopez-Fernandez. "Internet addiction and problematic Internet use: A systematic review of clinical research." *World Journal of Psychiatry,* vol. 6, no. 1, March 2016. https://pmc.ncbi.nlm.nih.gov/articles/PMC4804263/.

[3] Aboujaoude, Elias. "Problematic Internet use: an overview." *World Psychiatry,* vol. 9, no. 2, June 2010. https://pmc.ncbi.nlm.nih.gov/articles/PMC2911081/.

[4] Bilge, Mehmet, *et al.* "Investigating the association between adolescent internet addiction and parental attitudes." *International Journal of Public Health,* vol. 67, 2022. https://www.ssph-journal.org/journals/international-journal-of-public-health/articles/10.3389/ijph.2022.1605065/pdf.

[5] Zubair, Ujala, *et al.* "Link between excessive social media use and psychiatric disorders." *Annals of Medicine and Surgery,* vol. 85, no. 4, April 2023, pp. 875-878. https://journals.lww.com/annals-of-medicine-and-surgery/fulltext/2023/04000/Link_between_excessive_social_media_use_and.42.aspx.

[6] Maurya, Ved Prakash, *et al.* "Cognitive behaviour therapy in treatment of internet addiction: Case studies." *Journal of Clinical Psychology,* vol. 48, no. 1, April 2022, pp. 85-88.

[7] Bielefeld, Martin, *et al.* "Comorbidity of Internet use disorder and attention deficit hyperactivity disorder: Two adult case–control studies." *Journal of Behavioral Addictions,* vol. 6, no. 4, December 2017, pp. 490-504. https://akjournals.com/view/journals/2006/6/4/article-p490.xml.

[8] Alavi, Seyyed Salman, *et al.* "The effect of psychiatric symptoms on the internet addiction disorder in Isfahan's University students." *Journal of Research in Medical Sciences: The Official Journal of Isfahan University of Medical Sciences,* vol. 16, no. 6, June 2011, pp. 793-800. https://pmc. ncbi.nlm.nih.gov/articles/PMC3214398/.

[9] Lutfian, *et al.* "The use of cognitive behaviour therapy as a treatment of internet addiction disorder in adolescents: Literature review." *Journal of Public Health Research and Community Health Development,* vol. 6, no. 2, March 2023, pp. 161-169.

[10] Ding, Keya and Hui Li. "Digital addiction intervention for children and adolescents: A scoping review." *International Journal of Environmental Research and Public Health,* vol. 20, no. 6, March 2023. https://www.mdpi.com/1660-4601/20/6/4777.

[11] Joseph, Jaison, *et al.* "Prevalence of internet addiction among college students in the Indian setting: A systematic review and meta-analysis." *General Psychiatry,* vol. 34, no. 4, August 2021. http://dx.doi.org/10.1136/gpsych-2021-100496.

[12] Alavi, Seyyed Salman, *et al.* "The effects of cognitive-behavioral group therapy for reducing symptoms of internet addiction disorder and promoting quality of life and mental health." *Trends in Psychiatry and Psychotherapy,* vol. 43, 2021, pp. 47-56. https://www.scielo.br/j/trends/a/HR8DTJGYZQdbtVVCWtFgwpt/?format=html&lang=en.

[13] Liu, Jun, Jing Nie and Yafeng Wang. "Effects of group counseling programs, cognitive behavioral therapy and sports intervention on internet addiction in East Asia: a systematic review and meta-analysis." *International Journal of Environmental Research and Public Health,* vol. 14, no. 12, November 2017. https://www.mdpi.com/1660-4601/14/12/1470.

[14] Agbaria, Qutaiba. "Cognitive behavioral intervention in dealing with Internet addiction among Arab teenagers in Israel." *International Journal of Mental Health and Addiction,* vol. 21, no. 4, January 2022, pp. 2493-2507. https://link.springer.com/article/10.1007/s11469-021-00733-6.

[15] Lopez-Fernandez, Olatz, *et al.* "Perceptions underlying addictive technology use patterns: Insights for cognitive-behavioural therapy." *International journal of environmental research and public health,* vol. 19, no. 1, January 2022. https://www.mdpi.com/1660-4601/19/1/544.

[16] Stevens, Matthew WR, *et al.* "Cognitive–behavioral therapy for Internet gaming disorder: A systematic review and meta-analysis." *Clinical psychology & psychotherapy,* vol. 26, no. 2, October 2018, pp. 191-203. https://onlinelibrary.wiley.com/doi/abs/10.1002/cpp.2341.

[17] Kim, Sang-Hyun, *et al.* "The effects of group cognitive behavioral therapy on the improvement of depression and anxiety in adolescents with problematic internet use." *Journal of the Korean Academy of Child and Adolescent Psychiatry,* vol. 29, no. 2, April 2018, pp. 73-79. https://pmc.ncbi.nlm.nih.gov/articles/PMC7298901/.